

### REMARKS

Claims 1-22 are currently pending. Claims 1-22 are rejected. Reconsideration and allowance of the claims is respectfully requested.

### Double Patenting Rejection

Claims 1-22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-22 of co-pending U.S. Patent Application No. 10/691,752. A terminal disclaimer filed in compliance with 37 CFR 1.321(c) is submitted herewith. Consequently, the Applicants respectfully submits that Claims 1-22 are now in condition for allowance. Accordingly, the Applicants respectfully request the withdrawal of the rejection based on the above noted non-statutory grounds.

### Drawings

The drawings are objected to. The objections to the drawings have been obviated by amendments to the claims and drawings. Accordingly, Applicants respectfully request the withdrawal of the objections to the drawings.

### 103 Rejections

Claims 1, 10-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Feng et al. (US 6,529,342) in view of Kuroda et al. (US 5,546,374). Applicants have reviewed the cited reference and respectfully submit that the embodiments of the present invention as are recited in Claims 1 and 10-12 are neither anticipated nor rendered obvious by Feng et al. in view of Kuroda et al.

The Examiner is respectfully directed to independent Claim 1. The present invention explicitly recites and claims, for example in Claim 13:

(Amended) A method for eliminating an electrical potential difference between a slider body and a hard disk of a hard disk drive, the method comprising the steps of:  
detecting a flying-height spacing of the slider body between the slider body and the hard disk; and  
applying a predetermined bias voltage between the slider body and the hard disk, the predetermined bias voltage including a DC component and an AC component and being based on the detected flying-height spacing of the slider body. (Emphasis added)

Feng et al. in view of Kuroda et al does not anticipate or render obvious a method for eliminating an electrical potential difference between a slider body and a hard disk of a hard disk drive that includes “applying a predetermined bias voltage between the slider body and the hard disk, the predetermined bias voltage including a DC component and an AC component and being based on the detected flying-height spacing of the slider body.” In order to meet the limitations of Claim 1, the references must teach or suggest, either expressly or inherently, along with the other limitations of Claim 1: (1) the application of a predetermined bias voltage between a slider body and a hard disk, where (2) the bias voltage includes a DC component and an AC component, (3) that is based on a detected flying height spacing of the slider body.

Feng et al. only shows a method for controlling flying height of a magnetic head. Feng et al. discloses that a magnetic heads flying height can be controlled by the application of a voltage between a magnetic head and a magnetic storage medium. Feng et al is concerned with control of flying height of the magnetic head and not with the elimination of the electrical potential difference between a slider body and a hard disk through the use of a bias voltage that includes both AC and DC components.

In fact nowhere in the Feng et al. reference is it taught or suggested that an electrical potential difference between a slider body and a hard disk of a hard disk drive can be eliminated by “applying a predetermined bias voltage between the slider body and the hard disk, the predetermined bias voltage including a DC component and an AC component and being based on the detected flying-height spacing of the slider body” as is set forth in Claim 1. Consequently, the embodiment of the Applicants invention that is set forth in Claim 1 is neither anticipated or rendered obvious by Feng et al.

Kuroda et al. does not remedy the deficiencies of Feng et al. outlined above. Kuroda et al does not anticipate or render obvious a method for eliminating an electrical potential difference between a slider body and a hard disk of a hard disk drive that includes “applying a predetermined bias voltage between the slider body and the hard disk, the predetermined bias voltage including a DC component and an AC component and being based on the detected flying-height spacing of the slider body

Kuroda et al. only shows an information recording and/or reproducing apparatus that uses a probe. Kuroda et al. discloses the use of a modulation voltage superimposed on a dc bias voltage to reproduce information that is recorded on a recording medium (see column 9, lines 37-65). However, Kuroda et al. is not concerned with employing a predetermined bias voltage that includes both AC and DC components as a means of eliminating electrical potential difference.

In fact, nowhere in the Kuroda et al. reference is it taught or suggested that an electrical potential difference between a slider body and a hard disk of a hard disk drive can be eliminated by “applying a predetermined bias voltage between the slider body and the hard disk, the predetermined bias voltage including a DC component and an AC component and being based on the detected flying-height spacing of the slider body” as is set forth in Claim 1.

Consequently, the embodiment of the Applicants invention that is set forth in Claim 1 is neither anticipated nor rendered obvious by Feng et al. and Kuroda et al. either alone or in combination.

Therefore, Applicants respectfully submit that Feng et al. in view of Kuroda et al. does not anticipate or render obvious the embodiment of the present invention as are recited in independent Claim 1, and as such Claim 1 overcomes the basis for its rejection under 35 U.S.C. 103(a). Accordingly, Applicants submit that Claim 1 is in condition for allowance. In addition, Feng et al. in view of Kuroda et al. does not anticipate or render obvious the embodiments of the present invention as are recited in Claims 10-12 which depend from independent Claim 1, and that Claims 10-12 are likewise in condition for allowance as being dependent on an allowable base claim.

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Feng et al. (US 6,529,342) in view of Kuroda et al. (US 5,546,374) and further in view of Chapin et al. (US 6,785,081). Chapin et al. does not remedy the deficiencies of Feng et al. and Kuroda et al. noted above. Chapin et al. does not anticipate or render obvious a method for eliminating an electrical potential difference between a slider body and a hard disk of a hard disk drive that includes “applying a predetermined bias voltage between the slider body and the hard disk, the predetermined bias voltage including a DC component and an AC component and being based on the detected flying-height spacing of the slider body.” Chapin et al. only shows a Fly height detector. Chapin et al. is concerned with detecting the fly height of a read/write head spatially disposed from a data storage surface during a data transfer operation. However, nowhere in the Chapin et al. reference is it taught or suggested that an electrical potential difference between a slider body and a hard disk of a hard disk drive can be eliminated by “applying a predetermined bias voltage between the slider body and the hard disk, the predetermined bias voltage including a DC component and an AC component and being based on the detected flying-height spacing of the slider body” as is set forth in Claim 1 (from which claim 4 depends). Consequently, the

embodiment of the Applicants invention that is set forth in Claim 4 is neither anticipated nor rendered obvious by Chapin et al.

Conclusion


In light of the above-listed amendments and remarks, Applicants respectfully request allowance of the remaining Claims.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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Amendments to the Drawings:

The attached sheets of drawings include changes to Figure 4 and Figure 12. These sheets, which include Figure 4 and Figure 12, replaces the original sheets that included Figure 4 and Figure 12. In Figure 4, element 405 and it's reference number has been deleted. In Figure 12, reference number 1206 and associated arrow J920030149has been deleted.